Celeste Smith – Sustainability Course 2015 (Shakira Provasoli)

Lesson Plan #1 – The Water Cycle November 6, 2015

Goal - Teacher will help 4th graders to familiarize themselves with the continuous movement of water within our environment and begin to appreciate it as an invaluable resource. Nature recycles our water and access to clean water helps prevent disease and death. Everyone is not fortunate to have safe drinking water.

Aim – How does water move within our environment?

Standards – RI4.3, 4.5, 4.7, 4.9, PE Key Idea 2.1c

Vocabulary –

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| 1. Water Cycle – the cycle of processes by which water circulates between the earth's oceans, atmosphere, and land, involving precipitation as rain and snow, drainage in streams and rivers, and return to the atmosphere by evaporation and transpiration. 2. Transpiration – the evaporation of water from plant leaves 3. Evaporation – when liquid turns to a gas because of an increase in temperature and/or pressure 4. Precipitation – rain, snow, sleet, or hail that falls to the ground 5. Condensation – the change of water from a gas form (water vapor) into liquid form. 6. Runoff – the movement of landwater to the oceans, rivers, lakes, and streams.   Objectives -   * SWBAT understand that water changes state as it moves through the water cycle * SWBAT discuss and describe the process of the water cycle * SWBAT depict and clearly describe the stages of the water cycle in a creative format * SWBAT communicate his/her knowledge of the water cycle to class |
| Motivation – One minute web - WATER and then a gallery walk. Students will circulate the room then talk with at their table about observations made during the gallery walk.  Lesson Activities – Strategically place and cover items listed below. At the appointed time, ask student to remove the covering (bag, folder, etc.) and read question posted. Allow students time to discuss question. Allow groups to share out.   * 1 cup filled half way with water. Post the question – Where on Earth did I come from? * Wet paper towel in a bowl. Post the question – What would happen to this in a few hours? * Frozen water in a bottle. Post the question – If we let this sit out for a while, what will happen? |

Video - <http://www3.epa.gov/safewater/kids/flash/flash_watercycle.html> students will watch this interactive video to learn more about the water cycle. Recording notes if they want.

Differentiation – Teacher will provide students with varying printed texts (depending on reading abilities). The text structure is sequential as students should be able to follow the continuous flow of water throughout the water cycle. Teacher will also play water sounds as background music during the lesson while students are working.

Lesson Summary- Water moves through the earth in a cycle – the water cycle. In the cycle, the sun’s heat makes water evaporate, and the evaporated water condenses into clouds, which then produce precipitation (rain, snow, etc.). Water that does not get absorbed in the ground, evaporated, or transpired runs off into our large bodies of water.

Lesson Assessment – Teacher will separate the students into groups of 5 and assign each of them a role within the water cycle (precipitation, evaporation, condensation, transpiration, and runoff). Groups will have construction paper and crayons or colored pencils. Students will use their notes to illustrate and define their role. Groups will present and share out to the class.

TASK – What is your role? What happens to water during this part of the water cycle? Explain in at least 2 – 3 sentences.

Here are some titles of helpful books to display in class or have on hand for students to review during the unit.

*The Water Cycle*, by Trudi Strain Trueit; ISBN 0-531-16220-6

*The Snowflake-A Water Cycle Story*, by Neil Waldman; ISBN 0-7613-2347-3

*A Drop of Water – A Book of Science and Wonder*, by Walter Wick; ISBN 0-590-02319-5

*A Drop Around the World*, Barbara Shaw McKinney; ISBN 1-883220-72-6

*A Teacher’s Guide to A Drop Around the World*, by Bruce and Carol Malnor; ISBN 1-883220- 77-7

*The Life and Times of a Drop of Water*, by Raintree Press; ISBN 1-4109-1956-0

*The Magic School Bus – Wet All Over*, by Joanna Cole, Scholastic Inc; ISBN 0-590-50833-4

Here are a few websites I viewed prior to developing my lesson plan on the water cycle. Similar ideas have been used in the creation of my lesson plan.

<http://lessonplanspage.com/scienceowatercycle-assessmentandsources4-htm/>

<http://sciencenetlinks.com/lessons/the-water-cycle/>

<http://education.jlab.org/reading/water_cycle.html>

<http://www.valleywater.org/uploadedFiles/Programs/TeachersStudents/TeachingMaterials/watercycle%20boogie.pdf> student worksheets

<http://www.softschools.com/quizzes/science/water/quiz316.html> Each group will complete this electronic quiz as pre-test before the unit. This process will access what they already know as well as get them interested in learning more about the water cycle.

<http://www.discoverwater.org/blue-traveler/> Students will partner up and play this water cycle game on the laptops.

<http://bogglesworldesl.com/watercycle_worksheets.htm> - Students will complete these throughout the unit to review the vocabulary terms.

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| [Powered by iRubric](http://www.irubric.com/)**Presentation Rubric** | | | | | |
|  | **Poor** **1 pts** | **Fair** **2 pts** | **Good** **3 pts** | **Excellent** **4 pts** |  |
| **Organization** | Poor  Audience cannot understand presentation because there is no sequence of information. | Fair  Audience has difficulty following presentation because student jumps around. | Good  Student presents information in logical sequence which audience can follow. | Excellent  Student presents information in logical, interesting sequence which audience can follow. |  |
| **Subject Knowledge** | Poor  Student does not have grasp of information; student cannot answer questions about subject. | Fair  Student is uncomfortable with information and is able to answer only rudimentary questions. | Good  Student is at ease with expected answers to all questions, but fails to elaborate. | Excellent  Student demonstrates full knowledge (more than required) by answering all class questions with explanations and elaboration. |  |
| **Graphics** | Poor  Student uses superfluous graphics or no graphics | Fair  Student occasionally uses graphics that rarely support text and presentation. | Good  Student's graphics relate to text and presentation. | Excellent  Student's graphics explain and reinforce screen text and presentation. |  |
| **Mechanics** | Poor  Student's presentation has four or more spelling errors and/or grammatical errors. | Fair  Presentation has three misspellings and/or grammatical errors. | Good  Presentation has no more than two misspellings and/or grammatical errors. | Excellent  Presentation has no misspellings or grammatical errors. |  |
| **Eye Contact** | Poor  Student reads all of report with no eye contact. | Fair  Student occasionally uses eye contact, but still reads most of report. | Good  Student maintains eye contact most of the time but frequently returns to notes. | Excellent  Student maintains eye contact with audience, seldom returning to notes. |  |
| **Speech** | Poor  Student mumbles, incorrectly pronounces terms, and speaks too quietly for students in the back of class to hear. | Fair  Student's voice is low. Student incorrectly pronounces terms. Audience members have difficulty hearing presentation. | Good  Student's voice is clear. Student pronounces most words correctly. Most audience members can hear presentation. | Excellent  Student uses a clear voice and correct, precise pronunciation of terms so that all audience members can hear presentation. |  |

Each student will read or speak freely about their “role” in the water cycle. Written explanation should be in their own words and not be copied verbatim from any printed text given.